

end. So, too, with the feet. The protruding claws, hard, pointed, digital pads, ridged plantar pads, deeply emarginate webs, and wide hind feet are all better fitted for securing a firm hold upon hard or sandy ground and for traversing it swiftly and surely than are the softer more pliable feet of other members of the cat tribe; and I think it is probable that the long, rigid, and sharp carpal pad, when jammed against the soil, aids in arresting the headlong rush when a rapid turn after the pursued quarry is required. The long heavy tail, too, probably acts as a balance in wheeling at full speed. Similarly, the great enlargement of the posterior narial orifice must be regarded as a modification serving the end of admitting an abundant supply of air to the lungs to maintain the maximum of speed over the comparatively long distance that often has to be traversed before the fleet-footed quarry is overtaken\*.

Reverting once more to the feet, it is interesting to note that of all the species of Felidæ the caracal (*F. caracal*) comes nearest to the hunting leopard (*Acinonyx*) in the structure of the hind feet, and the caracal is the only other species of the family, so far as I am aware, which is trained in much the same way in certain parts of India for hunting game †.

### XLIX.—*The Melolonthine Beetles of Ceylon.*

By GILBERT J. ARROW.

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IN a pamphlet ('All about Grub,' by R. C. Haldane) published in Ceylon in 1881 the enormous amount of damage to the coffee-plantations of the island due to the root-destroying larvæ of the Melolonthinæ was described, and a rather unsuccessful attempt made to distinguish the various species of cockchafers (as they are collectively called) responsible for the injury. In an appendix the statement is made that "It

\* According to Major F. G. Alexander ('Harmsworth's Natural History,' i. p. 414, 1910) the hunting leopard can keep up its speed for 500 yards or more.

† Blanford ('Mammals of British India,' p. 89, 1883):—"Some Indian princes are said to have kept a large number of caracals for the purpose of hunting. Vigne, who saw them used, says that their speed is, if possible, greater in proportion even than that of the hunting leopard."

will, perhaps, surprise many planters to learn that there are between 15 and 20 kinds of cockchafers to be found in Ceylon." The enumeration which follows shows that the term is used in a wide sense, which includes not only the Melolonthinæ, but the allied subfamily Rutelinæ, of which alone I have enumerated, in two recent papers in the Ann. & Mag. Nat. Hist., 45 species found in Ceylon. The Ceylon Melolonthinæ were dealt with systematically by Brenske in Stett. ent. Zeit. 1900 (p. 341), and a total of 48 species counted. In the list which follows I enumerate 70, and it is quite certain that this number will be largely increased by future collecting. My present object is less to add to the list than to correct its nomenclature, which is in a very confused state, chiefly owing to the numerous and quite worthless descriptions of Walker, in which generic names are applied at random and all characters of real importance completely ignored. The types of these being in the British Museum, I have attempted to finally remove this difficulty.

One very large and remarkable insect included in Brenske's list (*Eucirrus mellyi*) is now omitted. It occurs in Borneo, Sumatra, and the Malay Peninsula; but there can be no doubt, I think, that its attribution to Ceylon is merely an ancient error. Another Melolonthid described as Ceylonese (*Trichoderma ceylanica*, Nonfr.) has been recently declared by Moser to have actually come from South America (Deutsche ent. Zeits. 1912, p. 325).

Three of Walker's species supposed by Brenske to belong to this group, although unrecognizable by him, really belong to the Rutelid genus *Anomala*. They are "*Omaloplia*" *fracta*, *hamifera*, and *semicineta*. Three others—*Rhizotrogus sulcifer*, *Plectris glabrilinea*, and *Plectris punctuligera*—with the other species called Addenda by Walker (Ann. Nat. Hist. (4) iii. 1859, p. 219) have never been found, and may or may not belong to this group.

An interesting point in connection with this part of the Ceylon fauna is the total absence of the Hopliini, which are numerous in the northern parts of India, as well as in Assam, Burma, and the Malayan Region.

The types of the new species in the following list are in the British Museum. Nearly all were found by Mr. E. E. Green or Mr. George Lewis, or by both:—

*Periserica* ("*Isonychus*") *ventralis*, Walk.

*P. picta*, Brenske.

*P. fulvostriata*, Brenske. This was described by Brenske as a variety of the preceding, but it is quite distinct.

- Periserica* (" *Omaloplia* ") *interrupta*, Walk.  
*P.* (" *Sericesthis* ") *subsignata*, Walk. The type is a unique and very defective female.  
*P. nigripennis*, sp. n.  
*Selaserica nitida*, Cand.  
*S. scutellaris*, sp. n.  
*S. sericea*, sp. n.  
*S. pusilla*, sp. n.  
*Serica variolosa*, Motsch. = *S. maculifera*, Brenske. Although Motschulsky's description of the legs is rather incomprehensible, there seems to me to be no reasonable doubt that his insect, which Brenske found himself unable to identify, is the latter's *S. maculifera*. It is curious that Brenske has charged Motschulsky with omitting to give the dimensions—a fault of which he is not guilty, but which Brenske himself, in the same paper, has perpetrated more than once (see *Autoserica cinerea* and *Neoserica splendidica*, p. 431).  
*S. rubescens*, sp. n.  
*S. fusa*, Brenske.  
*S. lurida*, Brenske. This and the two following species are unknown to me.  
*S. nana*, Brenske.  
*S. distincticornis*, Brenske.  
*S.* (" *Sericesthis* ") *confirmata*, Walk.  
*S. maculicauda*, sp. n.  
*Autoserica* (" *Sericesthis* ") *mollis*, Walk. = *A. singhalensis*, Brenske. Brenske has referred to the considerable variations in size exhibited by this insect. The smaller form, to which his type belongs, is generally distinguishable by sharper hind angles to the pronotum and less sharp and rather abbreviated supramarginal carinæ to the elytra. It can hardly be regarded as specifically distinct.  
*A.* (" *Sericesthis* ") *rotundata*, Walk. = *S. immunita*, Brenske.  
*A. straba*, Brenske. I do not know this species or the two which here follow.  
*A. implicata*, Brenske.  
*A. fistulosa*, Brenske.  
*A. cinnabarina*, Brenske.  
*A. calcarata*, Brenske.  
*A. chalybæa*, Brenske.  
*A. weliyamana*, Brenske.  
*A. dubia*, sp. n.  
*A. cinerea*, Brenske. Unknown to me.  
*A. pubescens*, sp. n.  
*Neoserica bombycina*, Karsch.  
*N. splendidica*, Brenske. Unknown to me.  
*Apogonia rauca*, F. = (" *Anomala* ") *punctatissima*, Walk. I believe *Apogonia soluta*, *liberata*, and *intacta*, of Kolbe (the last mistakenly referred to as "*incerta*" and "*inserta*" by Brenske, Stett. ent. Zeit. 1900, p. 349), to be forms of *A. rauca*, F., as well as Brenske's var. *unistriata*.  
*A. prolifica*, sp. n.  
*A. ferruginea*, F. = *A. uniformis*, Bl., and *A. anfracta*, Karsch. The types of *A. ferruginea* and *rauca* are in the British Museum.  
*A. cava*, Karsch. This is a doubtful species. The fragmentary description applies entirely to *A. ferruginea*, of which the type may be a rather large specimen.

- Apogonia* (" *Plectris* ") *solida*, Walk. = *A. ludificans*, Brenske. This was described by Brenske as a variety of *A. comosa*, Karsch, but I believe it to be specifically distinct. It is invariably larger, with the head and pronotum less closely punctured and the front tibia less produced at the end.
- A. comosa*, Karsch. I consider it doubtful whether this really occurs on the mainland of India as maintained by Brenske.
- A. lateralis*, sp. n.
- A. lurida*, Karsch.
- A. nana*, Walk. The type is unique and in bad condition.
- A. equabilis*, Karsch.
- A. gracilis*, sp. n.
- A. coriacea*, Wat.
- A. nietneri*, Kolbe.
- A. fulvosetosa*, sp. n.
- Schizonycha ruficollis*, F. = (" *Rhizotrogus* ") *equalis*, Walk, and *S. singhalensis*, Brenske. This was described by Fabricius from Southern India, and Brenske gives no sufficient reason for distinguishing the Ceylonese specimens. After a careful comparison of many examples from both Ceylon and the mainland (including the types of Walker and Fabricius) and a male specimen determined by Brenske himself as *S. singhalensis* I have come to the conclusion that they are identical. The genitalia of the males are alike.
- Engertia maculosa*, Brenske. A peculiar insect, decorated with patches of scales, of which apparently only a single female is yet known. Confirmation is needed of its Ceylon habitat.
- Lepidiota* (" *Melolontha* ") *ferruginosa*, Walk.
- Leucopholis pinguis*, Burn. = " *Melolontha* " *rubiginosa*, Walk.
- L. horni*, Brenske. Unknown to me.
- Stephanopholis singhalensis*, Brenske.
- S. rubicundus*, sp. n.
- S. cribricollis*, sp. n.
- S. melonithoides*, Brenske. Brenske saw specimens of this labelled "Columbien" and "Manila," both of them improbable localities. It seems possible that the former was a mistake for Colombo; but I do not know the species.
- Holotrichia serrata*, F. = *H. ceylonensis*, Moser. The minute differences pointed out by Moser do not seem to indicate more than a slight local race, of which probably many might be distinguished in this wide-ranging species.
- H. insularis*, Brenske.
- H. reynaudi*, Blanch. = " *Melolontha* " *pinguis*, Walk., and *H. remorata*, Brenske. M. Lesne has kindly established this synonymy for me by examination of Blanchard's type in the Paris Museum. In his table of the Ceylon species (Stett. ent. Zeit. lxi. 1900, p. 358), and in Mem. Soc. Ent. Belg. ii. 1894, pp. 19 & 66, Brenske has applied Blanchard's name to the following species.
- H. disparilis*, sp. n. = *Holotrichia reynaudi*, Brenske.
- H. scabrifrons*, Brenske. This species, described from a single male in 1892, Brenske has entirely omitted in his table of 1900. Mr. G. Lewis found a single female, now in the British Museum, at Bogawantalawa.
- H.* (" *Rhizotrogus* ") *inducta*, Walk.
- H.* (" *Rhizotrogus* ") *hirtipectus*, Walk. = *H. convexifrons*, Moser.
- H.* (" *Melolontha* ") *setosa*, Walk.
- H. rufoflava*, Brenske.

*Brahmina flavipennis*, Moser, Deutsche ent. Zeits. 1913, p. 276.

*Microtrichia eurystoma*, Burm. (= "*Rhizotrogus*") *exactus*, Walk., and *M. parva*, Brenske. Brenske applies the name *exacta* to small specimens of *eurystoma*, but the latter name is used by him for the following species.

*M. furcifer*, sp. n. This species, of which the male has a long antennal club and a remarkable pair of prongs at the end of the abdomen, has been carefully described by Brenske (Berl. ent. Zeit. xxxvii. 1892, p. 176) under the name of *M. eurystoma*, Burm. Burmeister's comparison with *Rhizotrogus ruficornis*, the words "nitidus" and "glänzend," and particularly the "kurzborstig" clothing of the body beneath clearly exclude the present insect.

*Microtrichia* ("*Rhizotrogus*") *costata*, Walk. = *M. puttalama*, Brenske.

*M. singhalensis*, Brenske.

*Idiochelyna*, gen. nov. ("*Isonychus*") *pectoralis*, Walk.

The genus *Periserica* is represented in the recent 'Catalogue of the Melolonthinæ' by only two species, of which one—*Omaloplia fracta*, Walker—really belongs to the Rutelinæ. Walker actually described three species of the genus, which he distributed amongst three different genera, and six are now known to me, all inhabitants of Ceylon. They will, perhaps, be recognizable from the following key:—

- |  |                                |
|--|--------------------------------|
| 1 ( 8). Upper surface pruinose.                    |                                |
| 2 ( 5). Form short and globular.                   |                                |
| 3 ( 4). Sides of the pronotum yellow . . . . .     | <i>picta</i> , Brenske.        |
| 4 ( 3). Sides of the pronotum not yellow . . . . . | <i>ventralis</i> , Walk.       |
| 5 ( 2). Form more elongate.                        |                                |
| 6 ( 7). Pronotum and elytra yellow and black.      | <i>fulvostriata</i> , Brenske. |
| 7 ( 6). Elytra entirely black . . . . .            | <i>nigripennis</i> , sp. n.    |
| 8 ( 1). Upper surface shining.                     |                                |
| 9 (10). Elytra pale, with dark marks . . . . .     | <i>interrupta</i> , Walk.      |
| 10 ( 9). Elytra black, with small yellow marks.    | <i>subsignata</i> , Walk.      |

### *Periserica nigripennis*, sp. n.

Nigra, capite pronoto scutelloque leviter cupreo-micantibus, pronoto prope marginem anguste flavo-vittato, elytris opacis, sericeis; elongata, fere oblonga, corpore supra parcissime sat longe setosa, capite parce punctato, clypeo medio tumido, margine antico fere recto, fronte medio fere carinato; pronoto modice punctato, lateribus vix arcuatis, angulis anticis paulo productis, posticis leviter rotundatis; scutello parcissime punctato; elytris striatis, striis minute parum regulariter punctatis, intervallis convexis, parce punctatis; pygidio modice punctato, subsericeo; tibiis anticis tridentatis:

♂, antennis 4-lamellatis, lamella prima paulo abbreviata.

Long. 8 mm.; lat. max. 4.5 mm.

*Hab.* CEYLON: Horton Plains (May, *E. E. Green*).

A single male specimen.

This species is easily recognized by its long narrow shape, the shining head and prothorax, the latter with narrow lateral yellow stripes, and opaque silky elytra. There is a rather strong smooth elevation at the middle of the clypeus, which is scarcely emarginate in front. The head, pronotum and scutellum, and also the pygidium, are deeply but sparsely punctured. The elytra are finely, closely, and rather irregularly punctured in the neighbourhood of the striæ.

*Slaserica scutellaris*, sp. n.

Rufa, polita, nitida, scutello solum opaco, elongata, elytrorum latitudine maximo apicem versus; capite grosse sed parce punctato, clypeo antice valde reflexo, fere recto; pronoto parce et sat minute punctato, lateribus vix arcuatis, angulo antico paulo producto, postico rotundato; elytris profunde striatis, striis minute punctatis, interstitiis paulo convexis, minutissime et parcissime punctatis; tibiis anticis tridentatis.

Long. 10 mm.; lat. max. 6 mm.

*Hab.* CEYLON: Dikoya, 4000 feet (Dec., Jan., *G. Lewis*).

The type is a unique female.

This resembles *S. nitida*, Cand., but is a little smaller and relatively rather shorter and more dilated behind. It is shining, like *S. nitida*, but with the scutellum opaque and with a very feeble silky reflection upon the elytra. The few punctures upon the elytral intervals are still more fine and scanty than in *S. nitida*; the alternate intervals are not distinctly broader than the others, as in that, nor more strongly punctured. The outermost interval is well punctured, but the rest are almost smooth. The hind angles of the pronotum are more rounded.

*Slaserica sericea*, sp. n.

Læte rufa, sericea, vix opaca, capite nitido, ovalis, postice sat lata; capite grosse punctato, antice paulo tumido, lævigato, clypei margine antico valde reflexo, leviter emarginato, fronte medio lævigato, vix carinato, pronoto fortiter sat crebre punctato, lateraliter paulo grossius, lateribus fere rectis, angulis anticis paulo productis, posticis obtusis; scutello paulo punctato; elytris fortiter, irregulariter punctatis, striatis, striis crebre punctatis, interstitiis convexis; tibiis anticis tridentatis:

♂, antennis 4-lamellatis, lamella prima paulo abbreviata.

Long. 10 mm.; lat. max. 6 mm.



*Hab.* CEYLON: Bogawantalawa, 5000 ft. (between 21st March and 4th April, *G. Lewis*).

The type is a single male.

It is rather lighter red in colour than *S. nitida* and *scutellaris*, and still shorter and more dilated behind than the latter. The clypeus alone is shining, and the remainder of the upper surface not opaque, but having a strong opalescent silky lustre. The puncturation is strong and deep, very scanty upon the head, fairly close upon the pronotum and in the elytral striæ, and scanty, though coarse, upon the intervals, which are convex and of nearly uniform width.

*Seluserica pusilla*, sp. n.

Rufo-testacea, elytris paulo pallidioribus, nitidissima, scutello elytrorumque marginibus externis opacis, sat longe ovata, capite fortiter sat parce punctato, clypeo medio lævi, tumido, margine antico fortiter exciso et reflexo; pronoto fortiter sat crebre et æqualiter punctato, lateribus arcuatis, angulis anticis paulo acutis, posticis rotundatis; elytris punctato-striatis, punctis profundis, irregularibus, intervallis convexis, parce punctatis; tibia antica tridentata, dento supero minuto, aliis longibus:

♂, antennis æqualiter 4-flabellatis, oculis magnis:

♀, antennis longe 3-flabellatis, oculis minoribus.

Long. 7-8 mm.

*Hab.* CEYLON: Diyatalawa (Sept., *T. Bainbrigge Fletcher*; Oct., *E. E. Green*).

This is a very distinct species of small size, rather pale colour, and very shining surface, the scutellum and the lateral margins of the elytra alone remaining opaque. The puncturation is everywhere rather coarse and fairly close upon the pronotum and in the elytral striæ. The upper surface bears rather long but scanty erect hairs, which are more numerous at the sides and along the front margin of the pronotum. The clypeus is elevated in the middle and deeply emarginate in front. The sides of the pronotum are evenly rounded and the hind angles completely rounded away. The third tooth of the front tibia is very blunt and feeble, and the others rather long and sharp. The club of the antenna is rather long in both sexes.

The eyes of the male are large, the intervening space being less than twice the diameter of one eye as seen from above.

*Serica rubescens*, sp. n.

Rufescens, opaca, ovata, elytris regulariter profunde striatis, sat dense minute setosis, capillis longioribus raris erectis, prothoracis lateribus lineaque mediana flavis, capite crebre punctato, oculis haud magnis.

Long. 4-5 mm.; lat. max. 3-3.5 mm.

*Hab.* CEYLON: Bogawantalawa, 5000 ft. (March, April, G. Lewis); Hakgala (March, April, E. E. Green); Horton Plains (May, E. E. Green).

In his description of *Serica maculifera* (= *variolosa*, Motsch.) Brenske has mentioned a unicolorous red-brown variety. This, although very closely similar to *S. variolosa*, is undoubtedly a distinct species, to which I have given the name above. It is relatively broader than *S. variolosa*, much more red in colour, often with a yellow scutellum, and the sides and middle line of the pronotum yellow as in the other species. The eyes are smaller and farther apart, the forehead more evenly punctured and without a median carina, the elytra more deeply and regularly sulcate and more finely punctured, with more numerous minute setæ and shorter erect bristles.

*Serica maculicauda*, sp. n.

Rufa, elytris obscurioribus pygidioque basi nigro-biplagiato; tota opaca, sericea, clypeo, tibiis tarsisque nitidis; elongato-ovata, convexa, pedibus gracilibus; clypeo modice punctato, antrorsum attenuato, margine antico reflexo, leviter exciso, fronte et pronoto sat parce punctatis, hujus lateribus fere rectis, angulis anticis acutis, posticis rotundatis; scutello elongato, modice punctato; elytris striatis, interstitiis angustis, convexis, subtiliter parce punctatis; pygidio magis crebre punctato, haud dense erecte piloso; tibiis anticis tridentatis, dente supero obtuso; antennis 9-articulatis, clava triflabellata.

Long. 12-13 mm.; lat. max. 7-7.5 mm.

*Hab.* CEYLON: Namunukuli (Feb., E. E. Green).

I have seen only three male specimens.

It is a rather large species, of almost the same size and shape as *Selaserica nitida*, Cand., but covered with an opaque velvety bloom which leaves only the clypeus, tibiæ, and tarsi shining. The head, pronotum, scutellum, and lower surface are of a fairly bright red colour, the elytra very deep red, and the pygidium is decorated on each side with a large semi-circular black patch placed on the base-line. The lower



surface and pygidium are clothed with erect, not very long or close, hairs, and a very few similar hairs are traceable upon the upper surface. The legs are long and slender, the front tibiæ armed with three teeth, of which the uppermost is very blunt.

I refer this provisionally to the genus *Serica*, although, according to Brenske's unsatisfactory table of the genera (Berl. ent. Zeit. xlii. 1897, p. 354), it should be placed in a different section on account of its tridentate front tibiæ. The only alternative is the creation of another new genus, which is undesirable upon such slight ground and in the present tangled state of the group. A closely related species is "*Sericesthis*" *confirmata*, Walker, which is scarcely more than half the length of *S. maculicauda* and more elongate. These two insects have a marked affinity to the species of *Selaserica*.

*Autoserica dubia*, sp. n.

Nigro-fusca, clypeo pedibus corporeque subtus rufis, sericeo-opaca, sparsissime erecte setosa, elongato-ovata, pedibus gracilibus, tibia postica paulo dilatata, valde spinosa, calcare superiori longitudine ad tarsi articulum primum æquali, clypeo nitido, leviter punctato, antice paulo tumido, subtiliter emarginato; pronoto parce et minute punctato, lateribus fere rectis, antice leviter arcuatis, angulis posticis fere rectis; scutello elongato, acuto; clytris punctato-striatis, interstitiis convexis, vix punctatis; pygidio parce subtiliter punctato:

♂, oculis magnis, clava antennali longe triflabellata.

Long. 8-9 mm.

*Hab.* CEYLON: Pattipola (May, *E. E. Green*).

This species closely resembles *A. weligamana*, Brenske, and I have, therefore, referred it to *Autoserica*, although in both species the legs are slender, and they would be almost equally well placed in the genus *Serica*.

*A. dubia* has the same elongate-oval shape as the allied species, as well as the dark brown colour and dull silky lustre of the upper surface; but the minute scale-like setæ are scarcely perceptible and the erect bristles are extremely few. In the male the eyes are much larger (the diameter of each not much less than the width of the space separating them) and the club of the antenna is much longer. The puncturation is very fine everywhere, moderately close in the elytral striæ, and very sparse elsewhere. The clypeus is very shining, feebly emarginate in front, the front tibia strongly

bidentate, the hind tibia a little dilated and bearing very long and stout spines, the upper terminal one as long as the basal joint of the tarsus.

*Autoserica pubescens*, sp. n.

Brunnea, ovalis, cinereo-pubescens, capite nitido parce inæqualiter punctato et erecte setoso, clypeo antice leviter tumido, margine antico fere recto, fortiter reflexo, pronoto, scutello et elytris æqualiter dense punctatis et subtiliter cinereo-setosis.  
Long. 6-6.5 mm.

*Hab.* CEYLON: Colombo (April, *E. E. Green*); Yatiyantota (Sept., *E. E. Green*).

This appears to be very similar to *A. cinerea*, Brenske, and is probably the species described by Brenske with the designation No. 106. The upper surface is finely, densely, and uniformly punctured and closely clothed with short grey decumbent hairs, except the head, which is shining, thinly and irregularly punctured, and bears only a few erect bristles. The first joint of the hind tarsus is longer than the second, and the antennal club of the male is as long as the footstalk.

Kolbe has enumerated (*Ent. Nachr.* xxv. 1899, p. 198) eleven species of *Apogonia* inhabiting Ceylon. Although I do not recognize several of these, there is no doubt that the actual number is considerably larger. Omitting the doubtful *A. cava*, Karsch, those now known to me may be tabulated as follows:—

1 (18). Body naked above.	
2 (15). Elytra not relatively long.	
3 (14). Elytra strongly punctured.	
4 (13). Forehead shining, not densely punctured.	
5 (10). Pronotum well punctured.	
6 ( 9). Elytra not very densely punctured.	
7 ( 8). Tarsi long, those of the ♂ very broad and clypeus bilobed	<i>æquabilis</i> , Karsch.
8 ( 7). Tarsi shorter, male and female similar	<i>ferruginea</i> , F.
9 ( 6). Elytra very densely punctured	<i>rauca</i> , F.
10 ( 5). Pronotum sparsely punctured.	
11 (12). Punctures of pronotum coarse	<i>prolixa</i> , sp. n.
12 (11). Punctures of pronotum fine	<i>nana</i> , Walker.
13 ( 4). Forehead densely punctured, not shining	<i>lurida</i> , Karsch.
14 ( 3). Elytra finely punctured	<i>nietneri</i> , Kolbe.
15 ( 2). Elytra relatively long.	
16 (17). Large; pronotum scarcely punctured	<i>coriacea</i> , Wat.
17 (16). Small; pronotum distinctly punctured	<i>gracilis</i> , sp. n.

- 18 (1). Body clothed with hair or scales above.  
 19 (24). Clothing consisting of long erect hairs.  
 20 (23). Elytra without opaque lateral margins.  
 21 (22). Forehead not densely punctured ..... *solida*, Walker.  
 22 (21). Forehead densely punctured ..... *comosa*, Karsch.  
 23 (20). Elytra with opaque lateral margins..... *lateralis*, sp. n.  
 24 (19). Clothing consisting of scales or setæ .... *fulvosetosa*, sp. n.

These insects are generally subject to considerable variation, and there is no apparent advantage in applying names to their various phases, as has been done by Brenske and Kolbe.

The new species named above are here described.

*Apogonia prolixa*, sp. n.

Obscure ænea vel viridi-nigra, tarsis antennisque rufis; robusta, modice elongata, convexa, nitida, fere nuda; clypeo brevi, fortiter punctato, antice lævissime emarginato, fronte parce sed profunde, pronoto grosse et parcissime, punctatis, hujus lateribus post medium fortiter arcuatis, antice et postice valde contractis, angulis anticis acutis, posticis obtusis; scutello elongato, fere impunctato; elytris fortiter ac crebre punctatis, lineis discoidalibus 2 geminatis parum perspicuis; pygidio grosse punctato; corpore subtus fortiter, lateraliter crebre punctato; tibiis anticis 3-dentatis, dente supero obtuso.

Long. 12 mm.; lat. max. 7 mm.

*Hab.* CEYLON: Ambawela (April, *E. E. Green*).

Only a single female specimen was found.

This is most nearly related to *A. rauca*, F., but is more elongate, the pronotum especially being narrow and strongly contracted in front and behind, so that the general outline is less compact. The clypeus is very gently emarginate. The puncturation, though equally strong, is much less close than in *A. rauca*. The pronotum is only very scantily punctured and the scutellum is long and almost smooth, having only a very few minute and inconspicuous punctures. The third tooth to the front tibia; although feeble, is very distinctive, as there is no trace of it in *A. rauca*.

*Apogonia gracilis*, sp. n.

Castanea, lateribus nonnunquam dilutioribus, capite (clypeo excepto) tibiisque fuscis, corpore subtus, pygidio, femoribus, tarsis antennisque flavescentibus; elongato-ovata, angusta, nitida, glabra, fere nuda; clypeo brevi, fortiter punctato, antice leviter emarginato, angulis rotundatis; fronte et vertice parce et irregulariter

minute punctatis, convexis; pronoto parce haud fortiter punctato, lateribus arcuatis, angulis anticis fere rectis, posticis obtusis; scutello lævi; elytris elongatis, sat fortiter haud crebre punctatis, lineis longitudinalibus angustis elevatis parum distinctis; pygidio punctis paucis magnis profunde impresso; pedibus gracilibus, tibiis anticis tridentatis, dentibus duobus inferioribus approximatis, haud acutis:

♂, oculis magnis, clypeo angustiori, fortius emarginato.  
Long. 8-9 mm.; lat. max. 4-4.5 mm.

*Hab.* CEYLON: Hakgala (May, *E. E. Green*); Pattipola (May, *E. E. Green*).

This species is very peculiar from its smooth shining upper surface and very long narrow form, due to the elongation of the elytra, the head and prothorax being very short. Its nearest ally seems to be *A. coriacea*, Wat., but it is smaller, much more elongate, and light brown in colour, with the tibiæ and the hinder part of the head dark. The puncturation is deep, though rather scanty. The legs are long and slender, the front tibia armed with three teeth, of which the uppermost is small and rather remote from the other two, which are close together, blunt, and not long.

There is considerable difference between the sexes. The male has the eyes larger and more prominent, the clypeus narrower and more strongly emarginate, the tarsi longer and more hairy and the front ones dilated. The abdomen is contracted beneath in this sex, the pygidium ventral in position and very protuberant.

#### *Apogonia lateralis*, sp. n.

Fusco-brunnea, antice leviter metallica, paulo relucens, supra undique erecte pilosa, breviter ovata; capite dense sat fortiter punctato, clypeo breviter rotundato-truncato; pronoto etiam fortiter et crebre punctato, basi medio paulo lobato, lateribus post medium valde angulatis, antice rectis, angulis omnibus obtusis; scutello minutius punctato; elytris fortiter ac dense punctatis, costis duabus discoidalibus angustis parum perspicuis, marginibus externis ab ante medium ad apicem haud late opacis; pygidio nitido, grosse punctato, corpore subtus fortiter haud dense punctato; tibia antica fortiter bidentato, dente apicali longo et curvato.

Long. 7-7.5 mm.; lat. max. 4.5 mm.

*Hab.* CEYLON: Northern Province, Killinochchi (November, *E. E. Green*).

A small, feebly metallic, brownish species, thickly clothed

with erect pale hair, and very similar to *A. comosa*, Karsch. It differs from that in having the head still more closely punctured, the sides of the pronotum more strongly rounded behind the middle, the terminal tooth of the front tibia more produced and the upper tooth shorter, but most markedly by the peculiar opaque band bordering the elytra externally. This is due to a microscopic sculpturing of the surface upon this area, which extends from near the middle of the outer margin to the sutural angle. It is flattened, and the punctures upon it are partially obliterated.

Four specimens were taken by Mr. Green.

*Apogonia fulvoetosa*, sp. n.

Obscure rufo-cuprea, undique breviter squamoso-setosa, setis fulvis, decumbentibus, corporis supra inæqualiter dispersis, corpore subtus squamis minutis regularibus vestito; robusta, sat lata, capite grosse inæqualiter punctato, clypeo brevi, punctato; pronoto rugose punctato, fossis vagis nonnullis lineaque lævi interrupta mediana prædita, lateribus post medium fortiter arcuatis, angulis anticis productis acutis, posticis obtusis; scutello crebre punctato et squamoso; elytris crebre punctato-rugosis, callis humeralibus et apicalibus prominentibus; pygidio grosse et rugose punctato, medio anguste carinato; pedibus gracilibus, tibia antica dentibus duobus brevibus tertioque vix perspicuo armata:

♂, tarsis paulo longioribus.

Long. 11–12 mm.; lat. max. 8 mm.

*Hab.* CEYLON: Peradeniya (*E. E. Green*).

Mr. Green found two specimens of this—a female in April and a male in the following May. It is of great interest from the fact that the nearest allied species are found in Celebes and other Malayan islands. It is a large compact insect, with a fine and close but irregular sculpture, and clothed with close-lying elongate yellow scales or scale-like setæ, those of the upper surface more elongate and less minute and regularly disposed than those upon the lower surface. The entire upper surface is finely and closely but rather rugosely punctured, with small smooth areas upon the head and pronotum, and several large shallow depressions upon the latter. The pygidium has a narrow, smooth, longitudinal carina along the middle. The legs are slender, the front tibia bearing two small and blunt teeth placed close together at the extremity and a very feeble one above them. The tarsi of the male are a little longer, and upon the front feet a little more dilated, than those of the female.

*Stephanopholis rubicundus*, sp. n.

Rufus, minute sat disperse flavo-squamosus, modice nitidus, corporis supra squamis minutis, elongatis, subtus paulo latioribus et densioribus; elongatus, fere depressus, capite rugose punctato, clypeo brevi, basi haud contracto, margine antico fere recto; pronoto fortiter sat crebre punctato, lateribus medio angulatis, angulis anticis obtusis, posticis acutis; scutello lato, parce punctato; elytris grosse fere rugose punctatis, singulo 5-costato, costis angustis, valde elevatis, politis; pygidio crebre punctato-rugoso et squamoso; pectore dense fulvo-villoso.

Long. 18.5 mm.; lat. max. 10 mm.

*Hab.* CEYLON: Bentote.

The only specimen I have seen is a male taken by the late Lord Dormer. It is a smaller and more compact insect than *S. singalensis*, and the scales with which it is clothed are much smaller and less closely set. The clypeus is smaller, more transverse, and not contracted at its base. The sides of the pronotum are less abruptly angulated in the middle and the hind angles are sharp and a little produced. The scutellum is broader and less strongly punctured. The elytra are coarsely punctured, each puncture containing a very minute elongate scale, and there are five sharp smooth costæ upon each, the first bordering the suture. The pygidium is rather closely pitted, each pit containing an oval scale, and the sides of the body beneath are closely clothed with similar but rather larger scales. The metasternal episterna also bear large scales partially covered with long yellow hair, with which the whole of the thorax is clothed beneath.

*Stephanopholis cribricollis*, sp. n.

Fusco-brunneus, tarsis antennisque rufis, minute et dense fulvo-squamosus; ovatus, convexus, haud nitidus, capite dense rugoso et setoso, fere plano, clypei margine antico recto, reflexo, lateribus arcuatis, basi haud contractis; pronoto dense rugoso, medio paulo grossius, ubique dense squamoso, squamis minutis, elongatis, lateribus post medium angulatis, angulis anticis obtusis, posticis fere rectis, haud acutis, paulo depressis; elytris grosse et confluentur punctatis, paulo minus dense squamosis, leviter trico-statis, parte externo vix costato; pygidio abdomineque subtus dense et minute flavo-squamosis, pectore longe fulvo-hirto.

Long. 19 mm.; lat. max. 9 mm.

*Hab.* CEYLON: Udugama (Dec., *E. E. Green*).



The unique type is a male presented by the Colombo Museum. A female specimen taken several years previously in the same locality probably belongs to the same species, but differs in the shape of the scales and other important features.

It is a more densely sculptured species than *S. singalensis* and *rubicundus*, and the clothing of scales is also denser, especially upon the pronotum. These are much smaller than those of *S. singalensis*, but are similar in size and shape to those of *S. rubicundus*. The elytral costæ are less narrow and prominent than in the two species mentioned. They consist of three well-marked dorsal ones—the first bordering the suture—and two very faint lateral ones. The legs, claws, and antennæ are similar in all three species. The clypeus is not narrowed at the base, as in *S. singalensis*. The pronotum is very finely and closely rugose and quite opaque, with the front angles obtuse but well marked, and the hind angles rectangular but blunt.

*Holotrichia disparilis*, sp. n.

Læte ferruginea, capite fusco; elongata, convexa, supra nitida, capite grosse punctato, vertice rugoso, clypeo arcuato, vix perspicue inciso; pronoto fortiter haud crebre punctato, lateribus medio fortiter angulatis antice paulo explanatis, minute crenulatis, angulis anticis paulo productis; scutello utrinque minute punctato; elytris fortiter sat æqualiter punctatis, singulo costa suturali distincta et tribus discoidalibus parum distinctis prædito, partibus apicalibus et lateralibus densius punctatis; pygidio undique dense punctato; pectore longe et dense pallide piloso:

♂, pedibus paulo gracilioribus:

♀, elytris apicem versus grosse rugosis.

Long. 18–21 mm.; lat. max. 9–10 mm.

*Hab.* CEYLON: Kalupahani, Haldummulle, Kelani Valley, near Colombo (*W. Braine*); Udapursellawa (April, *E. E. Green*); Hewaheta (March, *E. E. Green*).

Although similar in its general form and nearly related to *H. reynaudi*, Bl., this species has a very different appearance, due to its shining upper surface and closer puncturation. It is most markedly separated from other known species by the curious coarsely rugose area near the end of the elytra, but this is peculiar to the female.

As the names of all but one of the four species of

*Microtrichia* in Brenske's table are incorrect, the following one may be substituted :—

- |   |                                |
|---|--------------------------------|
| 1 (2). Elytra not setose . . . . .                                    | <i>singhalensis</i> , Brenske. |
| 2 (1). Elytra setose.   |                                |
| 3 (4). Body clothed with soft hair beneath . . . .                    | <i>furcifer</i> , Arrow.       |
| 4 (3). Body without soft hair.  |                                |
| 5 (6). Upper surface slightly shining . . . . .                       | <i>eurystoma</i> , Burm.       |
| 6 (5). Upper surface not shining, very densely<br>punctured . . . . . | <i>costata</i> , Walk.         |

#### IDIOCHELYNA, gen. nov.

Corpus elongatum, paulo depressum. Pedes modice longi; tarsi parum graciles, quam tibiae vix longiores; ungues simplices. Antennæ 8-articulatæ, clava 5-articulata, elongata. Clypeus angustus, subcircularis, basi leviter constricto, margine fortiter reflexo. Labrum acuminatum, ad clypeum connatum. Mandibulæ obsoletæ. Maxillæ degeneratæ, palpis gracilibus, 4-articulatis, articulo ultimo longo. Labium parvum, digitiforme, palpis contiguis, biarticulatis, articulo ultimo longissimo, recto. Abdomen subtus haud solidum, paulo arcuatum.

Femina ignota.

This genus is constituted for "*Isonychus*" *pectoralis* of Walker, a very peculiar insect without near affinity to any known Oriental genus. It belongs to the curious group in which the biting-parts of the mouth have completely degenerated, and the nearest related forms known to me are *Pachycolus* and *Perissosoma*, of the Madagascar region. As is the case with those, only the male is known. The legs are fairly long, but the tarsi are scarcely longer than the tibiae and the claws are quite simple. The antennæ consist of only eight joints, the three basal ones short and stout, and the remaining five forming a long club to which the footstalk is attached at about a third of its length. Mandibles are practically absent, and the maxillæ merely form bases for the long straight palpi, of which the last joint is as long as the other three together. The labium forms a long finger-like process, with its palpi close together and consisting of a short basal joint and a terminal one about four times as long.

Several specimens of this were taken by Mr. E. E. Green at Hakgala in September.